

Claims:

1. A method for coating a moving web with a coating solution containing one or more nanocrystalline, nanoporous inorganic compounds and one or more binders in a amount of from 0.5 % to 30 % by weight of the nanocrystalline, nanoporous inorganic compounds, wherein an auxiliary coating solution is applied together with said coating solution to the web and where said auxiliary coating solution contains at least one gelation-promoting ingredient which promotes the gelation of the coating solution containing the nanocrystalline, nanoporous inorganic compounds.
2. A method according to claim 1, wherein the coating solution containing the nanocrystalline, nanoporous inorganic compounds and the auxiliary coating solution are applied simultaneously to the web according to the multilayer slide-coating or curtain-coating technique.
3. A method according to claim 1, wherein the auxiliary coating solution is the uppermost layer of a multilayer assembly which includes the layer containing the nanocrystalline, nanoporous inorganic compounds.
4. A method according to claim 1, wherein the binders do not have a thermo-reversible gelling behavior.
5. A method according to claim 1, wherein the gelation-promoting ingredient is a cross-linking agent, boric acid or a borate.
6. A method according to claim 1, wherein the coated web is chilled to a temperature of 10° C or less immediately after coating and before drying.
7. A method according to claim 1, wherein the web is selected from the group consisting of coated or uncoated paper, transparent or opaque polyester film and fibrous textile materials.
8. A method according to claim 1, wherein the main coating solution containing the nanocrystalline, nanoporous inorganic compounds forms the ink-receiving layer of a recording sheet for ink jet printing.

9. A method according to claim 8, wherein the nanocrystalline, nanoporous inorganic compound in the ink-receiving layer is colloidal aluminium oxide, colloidal aluminium oxide/hydroxide, or a mixture thereof.
- 5 10. A method according to claim 8, wherein the nanocrystalline, nanoporous inorganic compound in the ink-receiving layer is colloidal γ - Al_2O_3 or pseudo-boehmite.
- 10 11. A method according to claim 8 wherein the nanocrystalline, nanoporous inorganic compound in the ink-receiving layer is aluminium oxide/hydroxide or pseudo-boehmite comprising one or more of the elements of the rare earth metal series of the periodic system of the elements with atomic numbers 57 to 71 in an amount of from 0.4 to 2.5 mole percent relative to Al_2O_3 .
- 15 12. A method according to claim 8, wherein the nanocrystalline, nanoporous inorganic compound in the ink-receiving layer is colloidal silicium dioxide.
13. A method according to claim 12, wherein the colloidal silicium dioxide is positively charged.
- 20 14. A method according to claim 1, wherein the main coating solution containing the nanocrystalline, nanoporous inorganic compounds forms the electrically active layer of an electrically active film.
- 25 15. A method according to claim 14, wherein the nanocrystalline, nanoporous inorganic compound is TiO_2 , MnO_2 , indium-tin-oxide, LiMn_2O_4 , LiNiO_2 , LiCoO_2 or $\text{Li}(\text{NiCo})\text{O}_2$ with specific surfaces between $10 \text{ m}^2/\text{g}$ and $400 \text{ m}^2/\text{g}$.
- 30
- 35